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ABSTRACT

To extend knowledge on second-order competences-defined as the firm's competence to build new competence- as a Valuable, Rare, Inimitable, and non-substitutable (VRIN) resource, we investigate how they are influenced by Entrepreneurial Orientation (EO) along and another contingent VRIN resource- Organizational Knowledge Creation. Results indicate that firm second-order competences are generally affected, in part, by EO, and in part, by organizational knowledge creation. Additionally, firm second-order competences, such as R&D and marketing, were variably influenced by the different forms of EO such as proactiveness, and competitive aggressiveness, but not in the case of innovativeness and risk taking. However, organizational knowledge creation manifests consistent effect on both types of firm second-order competences. Result implications to theory and practice are discussed.

KEY WORDS

Second-order Competences, Entrepreneurial Orientation, Resources, Organizational Knowledge Creation

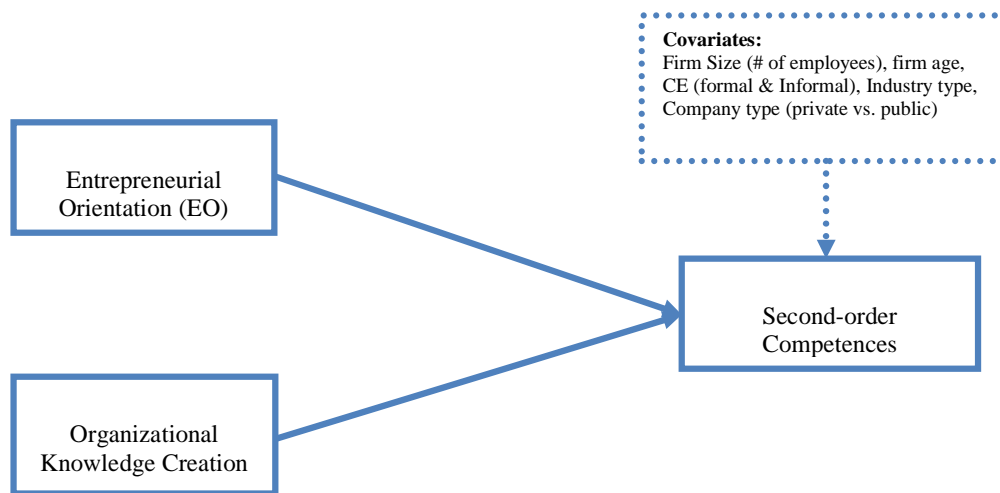


Figure 1 a schematic model of second-order competences in context of firm-level entrepreneurial behavior.

THEORETICAL FRAMEWORK

The following proposal presents a research synthesis of firm-level entrepreneurial framework that is inspired by Lumpkin and Dess (1996), Covin and Slevin (1991), and Zahra, Nielsen, and Bogner (1999). Entrepreneurial orientation (EO) – viewed in this study as a multidimensional construct reflecting a firm's innovativeness, risk taking, pro-activeness and competitive aggressiveness - is theoretically articulated, empirically validated to have a moderately large influence on firm performance (Rauch, Wiklund, Lumpkin, and Frese, 2009). However, the relationship between EO and a firm's second-order competences remains largely unexplored. By firm second-order competences, we refer to the firm's ability to be "competence competent"- that is to build new competences such as second-order R&D and marketing competences (Danneels,2008). This research framework assumes such a firm's competences a -Valuable, Rare, Inimitable, and non-substitutable- (VRIN) resource. To that end, we examine various forms of a firm's second-order competences , as influenced, in part, by different EO processes (e.g. Innovativeness, proactiveness, risk taking and competitive aggressiveness) and ,in part, by an equally important VRIN resource- a firm's capacity to create knowledge. We acknowledge that (EO) is "... a strategic construct whose conceptual domain includes certain firm-level outcomes and management-related preferences, beliefs, and behaviors as expressed among a firm's top-level managers" (Covin, Green, and Slevin 2006:57). By considering a

ENTREPRENEURIAL ORIENTATION AND ORGANIZATIONAL KNOWLEDGE CREATION AS CRITICAL PATHWAYS TO SECOND-ORDER COMPETENCES

direct association between EO and firm second-order competences, while accounting for a firm's internal and a fundamental contingent factor- organizational knowledge creation- our objective is to provide a parsimonious framework to extend our understanding, in context of firm-level entrepreneurship, of what and how second-order competences are impacted by 1) a firm's predisposition to its entrepreneurial behavior and decision making style and 2) by a firm's capacity to create knowledge to support its knowledge repertoire. A firm's second-order competences and organizational knowledge creation contribute to the larger firm's VRIN internal resources necessary to sustain the firm competitive advantage and generate economic rent (McGrath, MacMillan, and Venkataraman, 1995; McGrath, Tsai, Venkataraman, and MacMillan, 1996).

This study extends entrepreneurship literature and proposes a parsimonious model that theoretically articulates, and with empirical evidence, a significant relationship between EO and second-order competences of the firm. We thereby respond to call from Zahra (2007) and Wiklund, Davidsson, Audretsch, and Karlsson (2011) to integrate an emerging phenomenon with a new theory that process-oriented rather than content-oriented - competence development and organizational knowledge creation perspective - respectively.

Additionally, our proposed model integrates organizational knowledge creation, a process-based perspective, as such, provides an extended view for firm-level entrepreneurial behavior, thus far, broadly viewed from a content stance (Dess, Ireland, Zahra, and Floyd, 2003). We also contribute to strategic entrepreneurship (SE) literature involving "organizationally consequential innovations that are adopted in the pursuit of competitive advantage" (Kuratko and Audretsch, 2008:7). Finally, this is a primer research for more insights to literatures of SE and competence development that could draw from. In particular, firm capabilities to extend competences are "specific and identifiable processes" (Barreto, 2010:260) with core role to changing key internal firm elements, change according to market changes and rely on existing and new knowledge (Eisenhardt and Martin, 2000).

Consequently, competence development assumptions are of dynamic nature, with organizational knowledge as an essential account, engineered by specific to knowledge creation processes, as a firm assumes entrepreneurial predisposition and postures to sustain and extend strategic competitiveness. The research investigates second-order competences of the firm in context of firm-level entrepreneurial behavior that is inspired by Lumpkin and Dess (1996), Covin and Slevin (1991), and Zahra, Nielsen, and Bogner (1999). We integrate such firm strategic critical resources (Barney, 1991) as organizational knowledge creation (Nonaka, 1994) and second-order competences (Danneels, 2008). The principal focus of this study is on the direct and different impact of a firm's EO – Innovativeness, proactiveness, competitive aggressiveness and risk taking, on such forms of second-order competences as second-order R&D and marketing competences. We intend to present our empirical findings in the forthcoming SMS special conference in Tel Aviv, in 2014

Competence development of the firm is a pivotal concept in entrepreneurship but extant literature on it lacks consensus on how it is impacted with a range of entrepreneurial phenomena, and an integrative parsimonious predictive model is yet to emerge. Nevertheless, Covin and Slevin (1991) and Zahra, Nielsen, and Bogner (1999) insightfully put forth models that captured cascade effects of firm-level entrepreneurship behavior while accounting for various firm external and internal factors-including firm "competence" and "new knowledge" respectively. However, empirical support to validate their proposed models, to our knowledge, is yet to be achieved.

Towards that end, this research develops, and then, tests an improved model of firm-level entrepreneurial behavior that accounts for second-order competences along with organizational knowledge creation. Informed by the Austrian school of economics (Schumpeter, 1934), resource based view of the firm (Barney, Ketchen, and Wright, 2011; Danneels, 2008; Penrose, 1958), and the knowledge creation perspective (Nonaka 1994; Nonaka, Toyama, and Nagata 2000; Nonaka, 2007), it is theorized that EO yields different influence on firm second-order competences, and that second-order competences are also variously influenced by the firm's knowledge creation mode.

ENTREPRENEURIAL ORIENTATION AND ORGANIZATIONAL KNOWLEDGE CREATION AS CRITICAL PATHWAYS TO SECOND-ORDER COMPETENCES

Consequently, firm second order competences are influenced, in part, by EO, and in part, by organizational knowledge creation.

Specifically, and contrary to the advocated position in EO literature (Dess, Ireland, Zahra, and Floyd, 2003; Holcomb, Ireland, Holmes Jr., and Hitt, 2009; Zahra, Nielsen, and Bogner, 1999), but in concurrence with Lumpkin and Dess (2001), we suggest that 1) EO multi-dimensions have different influences on second order-competences of the firm and that 2) organizational knowledge creation plays a fundamental role on second order-competences of the firm as well. While entrepreneurship research has accounted for firm new knowledge such as the insightful work of Zahra et al (1999), Dess et al (2003), and Holcomb et al (2009), this research accounts for both types of firm knowledge- new and existing- as they are integrated via organizational knowledge creation (Nonaka, 1994; McDermott, Mudambi, and Parente 2013)

This research contributes (1) to entrepreneurship literature as it proposes a parsimonious model that theoretically articulates, with an empirically measurable model, a direct relationship between CE and firm competence development. To do so, and in responding to call of Zahra (2007), we integrate an emerging phenomenon and emerging theory- competence development and knowledge creation perspective- respectively. (2) We integrate in our model, a fundamental (process-by nature) construct, that is, organizational knowledge creation. In doing so, our model extends our view of firm-level entrepreneurship, a phenomenon, thus far, only viewed from a content stance (Dess et al, 2003). And (3), we hope to broaden our understanding on how and in which way CE and second-order competences, along with firm knowledge creation, influence decisions on strategic human resource allocation, upgrade and (or) growth and profit strategies that sets the trajectory for either organic growth of R&D or seeking external R&D resources via merger and acquisition.

Towards an Entrepreneurial Orientation and firm competences framework

Compared to well develop literature of market failure, there is still much space to develop research on “organizational-failure literature” (Mahoney, 2004:237). Resource-based theory articulates that a firm explores and integrates a mesh of unique internal resources and idiosyncratic skills in order to develop a sustained competitive advantage that, in turn, provides opportunities of survival and generation of profit and growth (Barney, 1991; McGrath, Tsai, Venkataraman, and MacMillan, 1996; Penrose, 1958; Wernerfelt, 1984). To create and sustain a firm's competences is, on one side, a must in today's organizations. Firms are required to be *competence competent* and that is an essential capability. On the other side, to manage firm competences is far from a straightforward endeavor. The most carefully developed competences often expire due to various influencing endogenous and exogenous attributes. Firms that do not sustain and (or) build their competence repertoire to be compatible with contemporary and changing attributes mentioned earlier will inevitably experience, not only a disruption in production or service delivery, but also, a greater risk that their competences be outdated. And therefore, such firms face constrained growth or even the possibility that these firms disappear from the market.

To expose EO different influences, along with the indispensable role of knowledge creation processes, on second-order competences of the firm, we integrate key literatures on EO, theory of knowledge creation dynamics, and competence development from strategic management. These literatures broadly view competence development of a firm's competences as a function of organizational strategy and knowledge. With the scarce attention to build a comprehensive, integrative and testable framework of these constructs compared to proposed models by Covin and Slevin (1991), Zahra, Nielsen, and Bogner (1999), and (Dess, Ireland, Zahra, and Floyd (2003), our primary focus is on what and how these constructs are, not only directly associated, but also, how they differ with their impact on competence development of the firm. For EO to enhance performance and growth mechanisms, it is fundamental that we investigate what and how firm develops its repertoire of competences while integrating knowledge creation processes. We acknowledge, and do not underestimate, the important established correlates between EO activities influence on performance (Rauch, Wiklund, Lumpkin, and Frese, 2009). Yet, our objective is to propose an improved model

ENTREPRENEURIAL ORIENTATION AND ORGANIZATIONAL KNOWLEDGE CREATION AS CRITICAL PATHWAYS TO SECOND-ORDER COMPETENCES

with specific correlates that will extend our understanding of firm competences in context of firm-level entrepreneurship that are antecedents to firm economic rent and financial performance (McGrath, MacMillan, and Venkataraman, 1995; McGrath, Tsai, Venkataraman, and MacMillan, 1996). In addition, our proposed relationships will offer insights with important managerial implications. Executives are under such constant pressure as market regulatory policies and clients increasing demands that are enhanced by knowledge diffusion and accessibility at much lower cost, and sometimes free. And therefore, those executives are mounting challenge to sustain competitive advantage of their organizations. This research aims to provide mechanisms and tool that managers can benefit from as they try to find answers to these challenges.

In general, we assume that a firm has a combination of basic competences that permits it hem to primarily exist within its industry. But we also assume that a firm has a different set of competences- this research labels them second-order competences- and where a firm differs to be “competence competent” (Danneels, 2008) from its competitor as it builds its sustainable competitive postures (Alvarez and Busenitz, 2001; Barney, 1991). As a firm adopts various entrepreneurial behavior and decision-making styles, these entrepreneurial postures will have a positive impact on the second-order competences of the firm. Specifically our first group of hypotheses predicts the following:

- EO holds a positive relationship with second-order competences of the firm such that:
- EO positively associates with a firm’s second-order R&D competence.
- Innovativeness positively associates with a firm’s second-order R&D competence.
- Proactiveness positively associates with a firm’s second-order R&D competence.
- Risk taking positively associates with a firm’s second-order R&D competence.
- Competitive aggressiveness positively associates with a firm’s second-order R&D competence.

In the same vein, we also predict that:

- EO holds a positive relationship with firm’s second-order marketing competences competence such that:
- Innovativeness positively associates with a firm’s second-order marketing competence.
- Proactiveness positively associates with a firm’s second-order marketing competence.
- Risk taking positively associates with a firm’s second-order marketing competence.
- Competitive aggressiveness positively associates with a firm’s second-order marketing competence.

Additionally, for second-order competences of a firm to work as growth resources, it is important that there development takes place, in part as an output of various entrepreneurial output, and in part, as influenced by the organizational knowledge creation necessary to bring about a firm’s strategic entrepreneurial aspirations to fruition. And therefore, our second group of hypotheses predicts that:

- Organizational knowledge creation positively associates with a firm’s second-order competences such that
- Organizational knowledge creation positively associates with a firm’s second-order R&D competence.
- Organizational knowledge creation positively associates with a firm’s second-order marketing competence.

METHODOLOGY

We test our model in an empirical context whereby our level of analysis is the firm and the sample is derived from various knowledge-intensive sectors. Data was collected using web-based survey, and in line with similar entrepreneurship research, our addressed respondents were most knowledgeable person inside the organization –the CEO or an executive board member. After contacting 94 companies, only 37 firms accepted to participate, from three specific knowledge-intensive sectors- Healthcare, IT and telecommunication-, yielding our final surveys to a 75 respondents. Given the nature of employed model construct measurements, we used CFA and ordinal logistic regression modeling and non-parametric analysis to test and our hypotheses and validate results rigor. Our data analysis 1) confirmed validity and reliability of our model three main constructs – therefore concurring that these constructs are multidimensional, and 2) supported our model main predicted

ENTREPRENEURIAL ORIENTATION AND ORGANIZATIONAL KNOWLEDGE CREATION AS CRITICAL PATHWAYS TO SECOND-ORDER COMPETENCES

relationships. Specifically, we found support to: association between EO and second-order competences of the firm, and also, we found support to association between organizational knowledge creation and second-order competences of the firm. Additionally, we found partial support to our predictions that different EO - innovativeness, proactiveness, competitive aggressiveness and risk taking - have various influence on second-order R&D and marketing competences.

CONCLUSION

Our proposed model put forth a theory intriguing and with empirical evidence, to explain what and how a firm's entrepreneurial competitiveness may differ based on the important association between an entrepreneurial posture and competence development. Building on Schumpeterian entrepreneurship, RBV, and inspired by Lumpkin and Dess (1996), Covin and Slevin (1991), and Zahra and colleagues (1999), we not only theoretically link, but also measure the effect of what and how a firm's competences are influenced, in part, by its entrepreneurial behavior and decision making styles, and in part, by how the firm creates knowledge. We partially answer the call that entrepreneurship research is in need to account for promising emerging phenomenon as explained by contemporary perspective (Zahra 2007) and Wiklund, Davidsson, Audretsch, and Karlsson (2011). This study probes for many such research avenues to further unveil other second-order competences a firm can develop, what moderating role the firm external environment factors might have on the relationship between CE and its competence development, what and how the latter relationship could also be influenced by various modes of organizational knowledge creation. Managers could also benefit from proposed model as a tool to help them examine, assess and measure the impact of their decisions that are intended to enhance a firm's growth, the selection of appropriate growth strategies, and the development of selective firm competences that ultimately influence performance. Additionally, this approach could offer executive managers an assessment technique to improve selective mechanisms of what and how to allocate critical organizational investment resource, while managing knowledge repertoire, to sustain competitiveness.

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ENTREPRENEURIAL ORIENTATION AND ORGANIZATIONAL KNOWLEDGE CREATION AS CRITICAL PATHWAYS TO SECOND-ORDER COMPETENCES

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